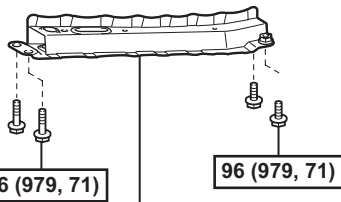
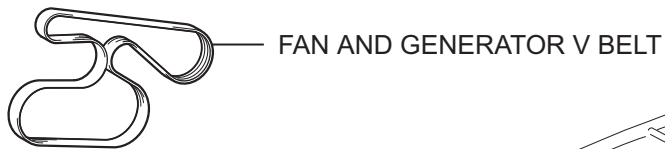
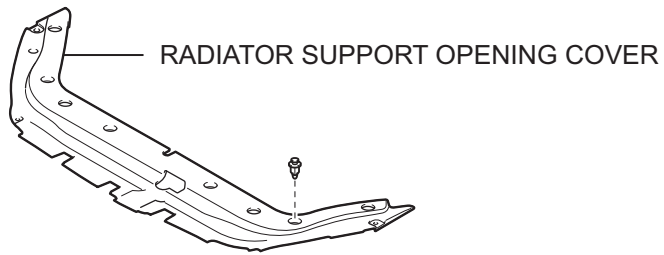
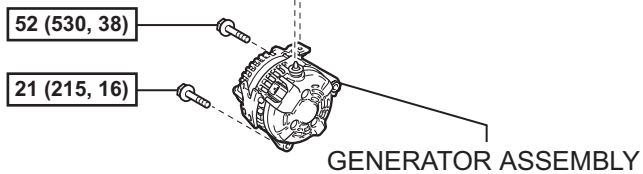
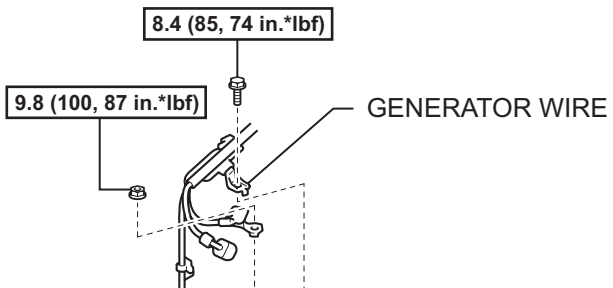


WATER PUMP

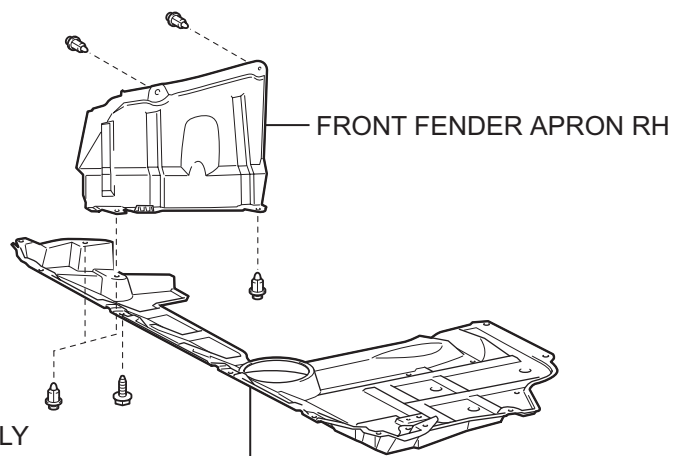
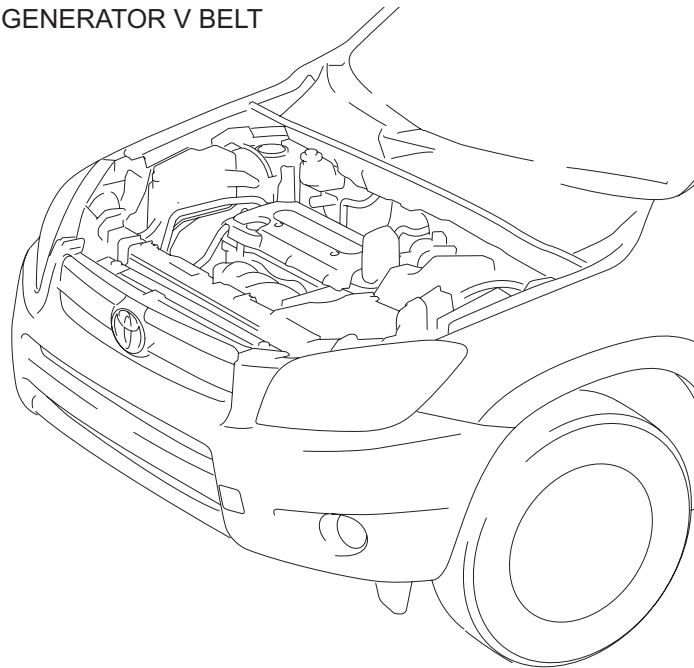
COMPONENTS



FRONT SUSPENSION MEMBER
REINFORCEMENT RH



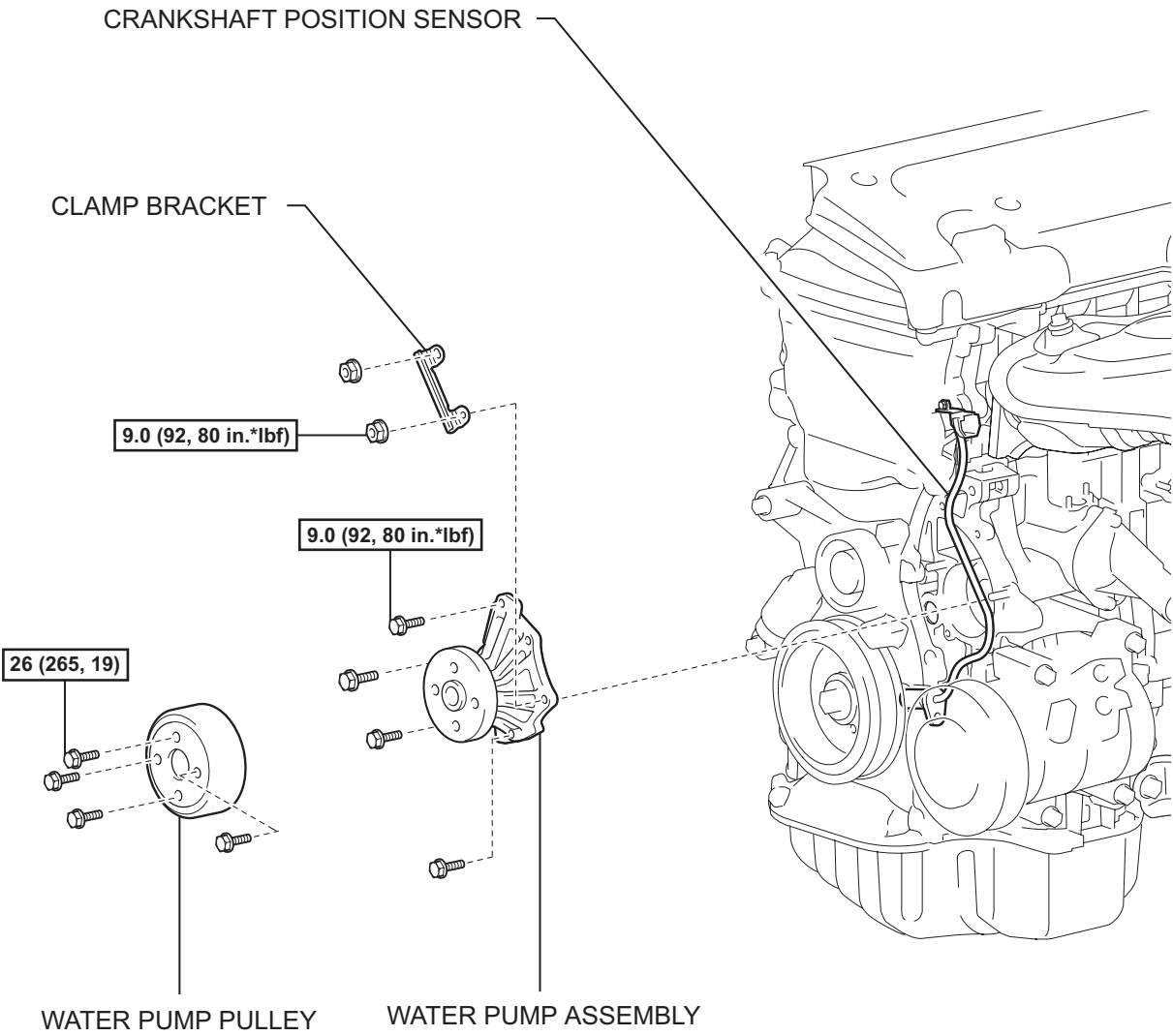
N*m (kgf*cm, ft.*lbf) : Specified torque



NO. 1 ENGINE UNDER COVER

CO

CO



N*m (kgf*cm, ft.*lbf) : Specified torque

REMOVAL

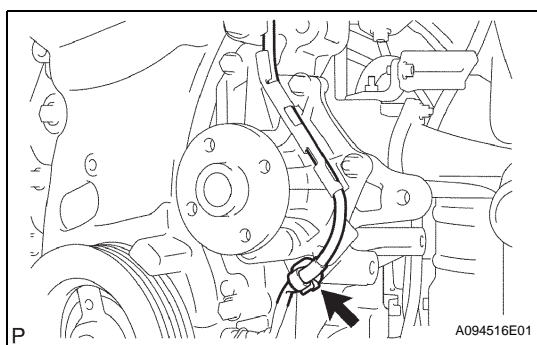
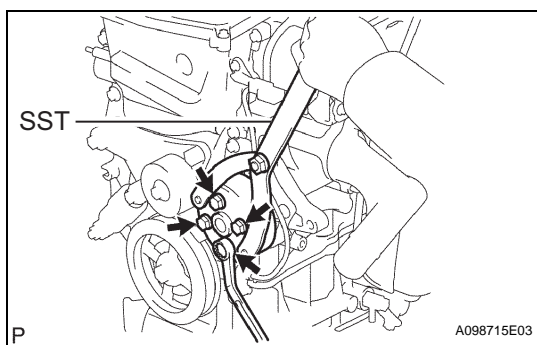
1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

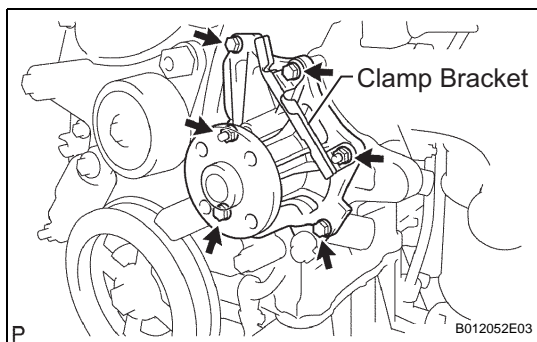
2. REMOVE NO. 1 ENGINE UNDER COVER
3. REMOVE FRONT FENDER APRON RH
4. REMOVE RADIATOR SUPPORT OPENING COVER
5. DRAIN ENGINE COOLANT (See page [CO-6](#))
6. REMOVE FRONT SUSPENSION MEMBER REINFORCEMENT RH (See page [EM-6](#))
7. REMOVE FAN AND GENERATOR V BELT (See page [EM-6](#))
8. REMOVE GENERATOR ASSEMBLY (See page [CH-9](#))
9. REMOVE WATER PUMP PULLEY
 - (a) Using SST, remove the 4 bolts and water pump pulley.

SST 09960-10010 (09962-01000, 09963-00700)

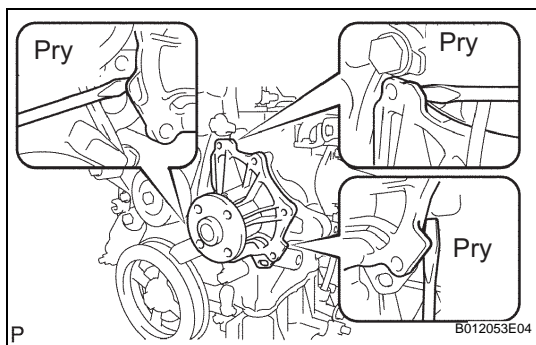


10. REMOVE WATER PUMP ASSEMBLY

- (a) Remove the clamp of the crankshaft position sensor from the water pump.
- (b) Disconnect the wire of the crankshaft position sensor from the clamp bracket.



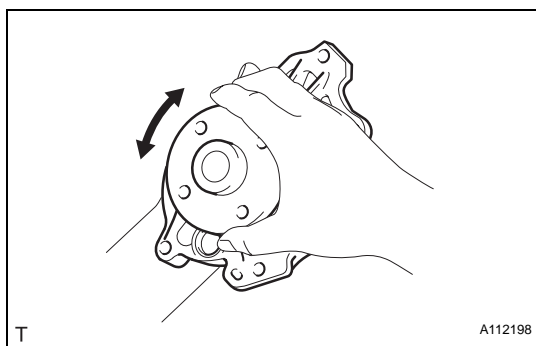
- (c) Remove the 4 bolts, 2 nuts and clamp bracket.



- (d) Using a screwdriver, pry between the water pump and cylinder block, and then remove the water pump.

NOTICE:

Be careful not to damage the contact surfaces of the water pump and cylinder block.



INSPECTION

1. INSPECT WATER PUMP ASSEMBLY

- (a) Visually check the drain hole for coolant leakage. If leakage is found, replace the water pump assembly.
- (b) Turn the pulley, and then check that the water pump bearing moves smoothly without making a "click" noise. If it does not move smoothly, replace the water pump assembly.

INSTALLATION

1. INSTALL WATER PUMP ASSEMBLY

- (a) Remove any old seal packing material from the contact surface.
- (b) Apply a continuous line of seal packing as shown in the illustration.

Seal packing:

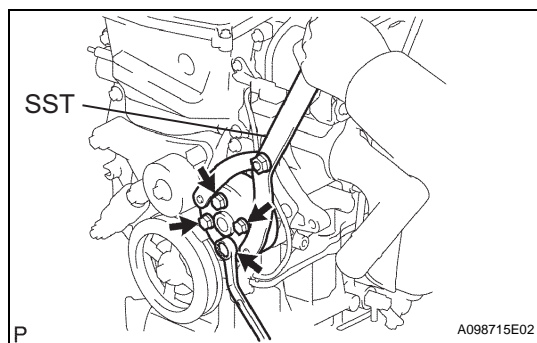
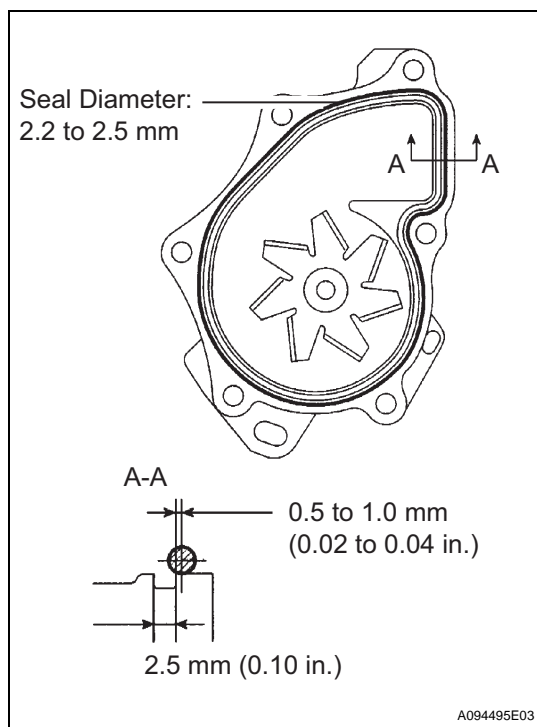
Toyota Genuine Seal Parking Black, Three Bond 1207B or equivalent

Standard seal diameter:

2.2 to 2.5 mm (0.09 to 0.10 in.)

NOTICE:

- Remove any oil from the contact surface.
 - The parts must be set within 3 minutes after applying seal packing. Otherwise, the material must be removed and reapplied.
- (c) Install the water pump and clamp bracket with the 4 bolts and 2 nuts.
Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)
 - (d) Install the wire of the crankshaft position sensor onto the clamp bracket.
 - (e) Install the clamp of the crankshaft position sensor onto the water pump.



2. INSTALL WATER PUMP PULLEY

- (a) Using SST, install the water pump pulley with the 4 bolts.
SST 09960-10010 (09962-01000, 09963-00700)
Torque: 26 N*m (265 kgf*cm, 19 ft.*lbf)

3. INSTALL GENERATOR ASSEMBLY (See page [CH-15](#))

4. INSTALL FAN AND GENERATOR V BELT (See page [EM-7](#))

5. INSTALL FRONT SUSPENSION MEMBER REINFORCEMENT RH (See page [EM-7](#))

6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

7. ADD ENGINE COOLANT (See page [CO-6](#))

8. CHECK FOR ENGINE COOLANT LEAKS (See page [CO-1](#))

9. INSTALL RADIATOR SUPPORT OPENING COVER

10. INSTALL FRONT FENDER APRON RH

11. INSTALL NO. 1 ENGINE UNDER COVER